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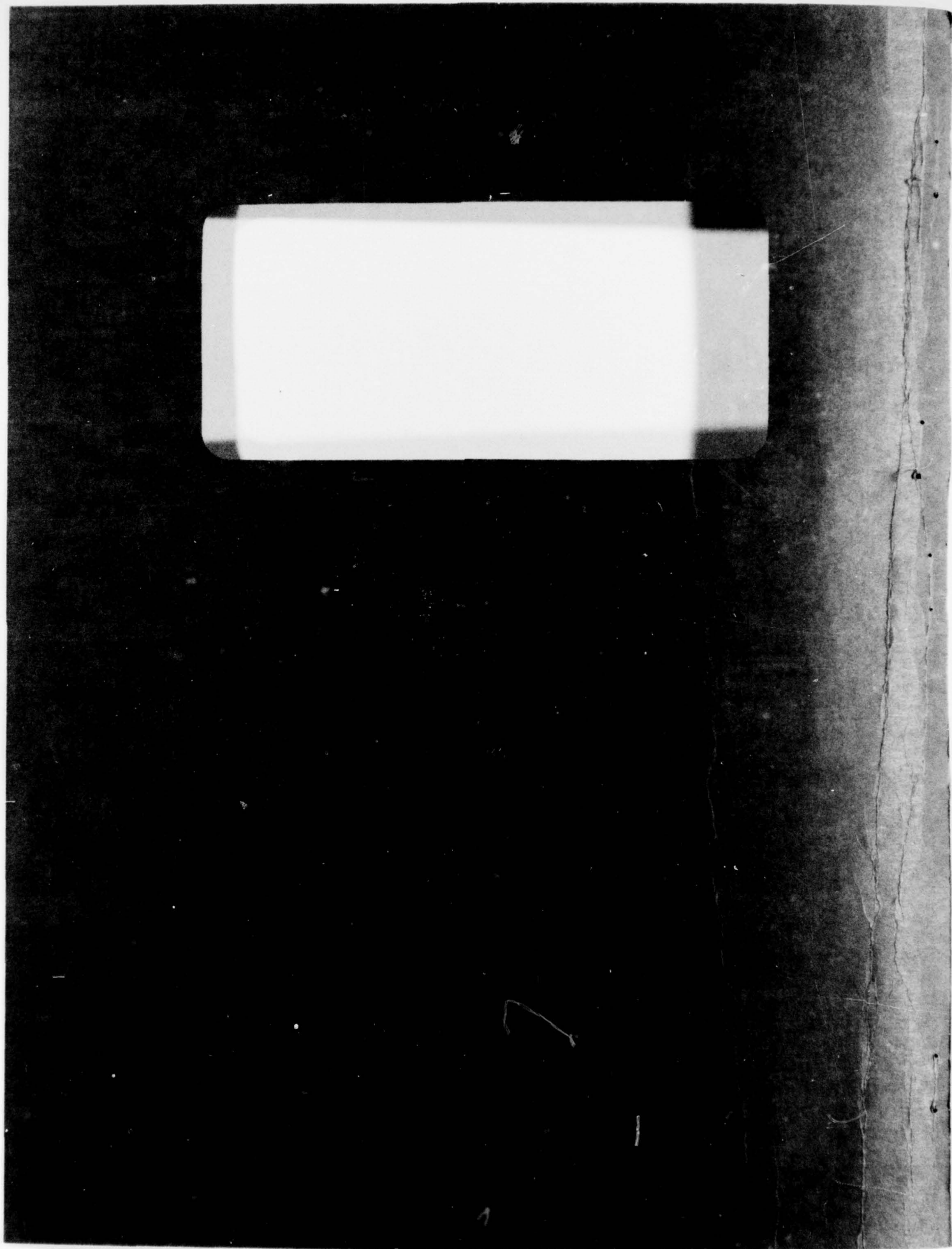
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PROJECTIVE MEASURES OF INTERPERSONAL RELATIONSHIPS  
AND ATTITUDES TOWARD THE AIR FORCE\*.

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ABSTRACT

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Samples of twenty Air Force Reenlistees and twenty deenlistees from a Missile Wing were studied with the Chromatic Differential Scale, a projective means for eliciting unconscious attitudes toward self, other persons, and institutions. Comparisons were made between the means for the two groups and also between the correlations exposing dynamics within each group.

The reenlistment group satisfied the hypothesis of having more positive attitudes about self, mother, father, crew mates, and wife than did the deenlistment group. Positive attitudes toward wife seem to be the most crucial confirming the results of other research by this laboratory.

The dynamics which were most different for the two groups indicated that those who reenlist have attitudes toward the Air Force which are negatively correlated with attitudes toward parents while the opposite was true of the departing group. One explanation for these differences is that the Air Force has become a parent replacement for the reenlistees making up for deficiencies no longer sought from parents. The deenlistment group members associate the Air Force directly with parents and project hostile feelings upon it as a result.

The reenlistment group members associate their crews and their wives directly with the Air Force and the attitudes toward these vary positively. The

de enlistment group's attitudes toward crews are less important and they put their wife in the balance against the Air Force. Thus, their attitudes toward one are negatively correlated with their attitudes toward the other.

It would seem that those who reenlist do so with the mutual agreement with their wives and to leave their parents while those who deenlist seem to hope to regain marital harmony and to exert independence from their parents, who in this case, are positively associated with the Air Force.

Ironically, the reenlistees have less positive attitudes toward war than do the deenlistees reinforcing contentions that SAC's mission is peace



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INTRODUCTION

Interpersonal relationships have long been recognized as important determiners of an adult's reaction to his work. The nature of these influences has not been studied because of a lack of appropriate instruments to measure feelings and a failure to obtain concrete criteria of organizational attitudes. Argyris (1964,1965) in his research of T-Groups demonstrated the strong interpersonal components in satisfaction with organizational life. An individual has multiple group memberships, all of which exert varying degrees of influence upon his behavior or his willingness to participate in organizational objectives. Homans (1960), and Sherif and Sherif (1965) emphasize the group pressures which are exerted on the individual by both his peer groups and family members, as well. Rensis Likert's (1961) discussion of his "overlapping group model" illustrated some of the potential for intrapsychic conflict which multiple group membership can induce.

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The literature on the influence of early childhood experiences upon work attitudes is sparse. Cattell (1964) has concluded from his study of U. I. 28 that a highly restrictive home environment generates excessive passivity and dependence upon "authority" figures. An early study by Hoppock (1935) found family influence and status to be positively related with job satisfaction.

The influence of peer groups upon satisfaction has been found to be great (Dalton, 1947), for those who have affiliation needs and social skills, Porter (1962) showed that work was associated with a perceived similarity of personality traits between themselves and their superordinate. Schuh (1965) demonstrated that cohesiveness of the group is an important factor on both the satisfaction and the dissatisfaction of the individual depending upon the general attitudes espoused by the group and the individual acceptance of the group. Bernberg's (1952) work underscores the influence of the group in the areas of satisfaction and dissatisfaction.

Brown (1962) cites the difficulty in assessing "feelings" and "attitudes" of workers, particularly when they run counter to the peer culture or prevailing social norms, and especially, if repeated measures are used. For these reasons it appears that successful research in the effects of underlying attitudes upon job satisfaction must utilize more subtle projective instruments, such as the Chromatic Differential Scale by Sweney and Bowles (1970). When considering satisfactions of young people with the military establishment, subtlety becomes a necessary consideration.

## METHODOLOGY

Subjects: A number of enlisted members of a Strategic Missile Wing were given the Chromatic Differential Scale at a time shortly preceding their official date of separation (DOS). This group was segregated for data analysis in two populations, those who were going to reenlist into the Air Force and those who intended to return to civilian life. A sample of twenty was obtained from each group. They were all "first termers" who had been exposed to a variety of in-service occupations, ranging from operations' crews, maintenance, security police to clerks in the headquarters and personnel sections. Efforts were made to balance these backgrounds in the two samples.

Instrument: The Chromatic Differential Scale is an objectively scored, projective test which measures covert attitudes toward self, significant others, and institutions. It utilizes six color scales of ten steps each. The colors are scaled by changing compositions of lithographers in incremental steps of 10 per cent. The subjects are asked to respond to the colors as universally neutral stimuli but identify their own reactions by their personal selection and rejection of the colors in each row. They then associate the colors with emotions and ultimately people, institutions, and themselves. Their responses are recorded on clear acetate sheets which are then compared a pair at a time to obtain objective numerical scores. The list below indicates the constructs used and the order of their presentation.

Selection: Like, Dislike

Emotions: Happiness, anger, sadness, success,  
and fear.

People: Mother, Father, Crew Members, Air Force,  
Wife, War, Self.

Administration: The tests were administered by an officer who had become associated with an on-going research program conducted in the wing. The subjects were all volunteers who had been assured of anonymity and were told that this study was another phase of a widely accepted program to gather meaningful data about their true feelings.

#### RESULTS

The results obtained are defined in terms of interpersonal relationships and emotional attitudes toward themselves, other persons, and the Air Force. Since relatively small samples were gathered in an area where little is known, the .10 level of significance was accepted as providing information which might show directions for future research or replication.

#### Means:

The two samples were compared for similarity or difference of attitudes toward Self, Mother, Father, Crew members, Air Force, War, and Wife.

#### Insert Table 1

The significant differences have been listed. In all cases the differences were in the predicted direction, i.e., the reenlistee would have more positive attitudes toward himself and others than did the de-enlistee. Whereas some attitudes toward the Air Force were significant, they did not seem to be as influential in the decision as were other areas. The most crucial differences were found in attitudes



toward the wife. The deenlistee was considerably more negative and angry with his wife and placed her at a greater distance from himself.

Success seems to be a reoccurring and hence important emotion. This could be paraphrased as "respect". Respect for Mother, Father, Air Force, Wife and Se'f are all highly present in the reenlistee. He also seems to come from a closer home since Mother and Father are closely associated. The fact that he is not necessarily close to his parents may indicate independence from parental home in favor of his marital home.

Dynamics:

Correlations between these emotional attitudes indicates that different dynamics are operating in those individuals who remains with the service than in those who leave. Tables 2-6 show the more dramatic differences in dynamics of the two groups, manifested by the differences in the respective correlations between attitudes toward "significant others" and the Air Force.

Insert Table 2

Even though the group that reenlists has a more favorable attitude toward Father than the de-enlistment group, the dynamics show an inverse relationship between positive attitudes toward Father and positive attitudes toward the Air Force. The deenlistment group shows positive correlations between attitudes toward the Air Force and those toward his Father. It would seem that the reenlistee is replacing negative attitudes toward Father with a positive attitudes toward Air Force, whereas the deenlistee is associating the two and directing anger or praise toward both simultaneously.

## Insert Table 3

Again the reenlistee group expresses an inverse relationship between attitudes toward Mother and toward the Air Force compared with positive correlations between these two areas in the deenlistee. The differences are larger, suggesting that this is similar to the dynamics found with Father but more dramatic. The "replacement" theory seems to describe the enlistment group where "guilt (or praise by association)" dynamics seem to apply to the deenlistment group.

## Insert Table 4

In contrast, the attitudes about Wife and the Air Force are positively correlated in the reenlistment group. This suggests that the commitment to the Air Force is mutually felt by husband and wife. As attitudes toward Wife increase, attitudes toward the Air Force increase and they also would decrease together.

In the deenlistment group negative correlations between attitudes toward Wife and attitudes toward the Air Force suggest a "tug of war" in which only one (Wife or Air Force) can be satisfied at the expense of the other. Since the mean attitudes toward the Wife already show considerable hostility and deterioration, it is not too surprising that these individuals leave the Air Force to mend their marriages.

## Insert Table 5

Few significant differences were found in the dynamics surrounding crew members. Those tendencies noticed, however, did fit the general

patterns found with the wives. The reenlistment group associated peers directly with the service while the deenlistees associated their peers less distinctly and often inversely with the Air Force. Thus, the reenlistees must view their peers as comrades and the deenlistees must view them as competitors.

Insert Table 6

The correlations between attitudes toward Self and attitudes toward the Air Force showed expected differences in dynamics. The reenlistee seems to have high positive correlations between attitudes toward himself and attitudes toward Air Force. The deenlistee has lower positive or negative correlations between Self attitudes and those toward the Air Force, except for two enigmatic areas where cross associations seem to indicate some unexplainable reversals of the trend. The means already indicate a more negative attitude toward Self in the deenlistments group, so these correlations can only be explained in terms of severe self rejections association with the rejection of the Air Force.

Insert Table 7

Even the language of psychology is still impoverished for terms to define interpersonal relationships. Table 7 shows how the respondent associations are correlated with attitudes toward the Air Force. The nature of these associations are hazy but the patterns which they make further amplify some of the dynamic differences already noted. In the reenlistment group, associations of Self with Father and Mother, or Wife with Father and Mother are negatively correlated with positive attitudes

toward the Air Force. This emphasizes the replacement concept and supplies a hint that the wife may even welcome the Air Force as a way of winning her husband from his parents. The reenlistee is more likely to be happy with the Air Force if he is relatively independent of crew members himself, but if he positively associates crew members with his Wife.

In the reenlistment group, interrelationships between Self and parents are positively correlated with attitudes toward the Air Force suggesting the lack of true emancipation. Associations between crew and Wife in this group evoke negative reactions, suggestive of jealousy and possessiveness.

#### DISCUSSION

This study has demonstrated the usefulness of projective devices for measuring subtle attitudes which might be distorted if filtered through social desirability in elevating them to consciousness. Not only have a large portion of the relationships been found to be significant in small samples, but distinctive replicated patterns were found which could be readily interpreted into fairly understandable dynamics.

The dominance of the Wife in these matters is abundantly clear and yet recent regulations make the Air Force Wife "off limits" as a subject for research. Since the Air Man's behaviors are the final criteria, it is possible that his submerged attitudes about her may be significant information. The reports on the Air Force Wife by



by Belt, et al, (1973) support the crucial place she plays in morale and the reenlistment decision.

Attitudes involving success formed another reoccurring pattern which continued to show significant discrimination. If success can be translated into respect, it would seem that respect for Self and Others is crucial in making mature decisions concerning vocational goals. It represents a step up in corticalization from the other more primitive emotions measured by this instrument.

#### SUMMARY

Reenlistees and deenlistees from a Missile Wing were compared by their responses on an objective, scored, projective instrument for measuring unconscious attitudes toward individuals and the Air Force. The reenlistment group were found to hold more positive attitudes toward themselves and others than did the deenlistment group. They seemed to be cementing their marriages by staying, while the de-enlistment group seem to close their course of action to help their marriages. Other dynamic differences suggest that the reenlistment group is using the Air Force as a substitute for parents while the deenlistment group associate the Air Force with the negative feelings which they direct toward parental authority.

TABLE 1: COMPARISONS MEANS OF ATTITUDES OF REENLISTEES

WITH DE-ENLISTEES

N = 20

ATTITUDES	Means *		Std. Deviations		t Ratio	Signific Level
	Reenlist	De-enlist	Reenlist	De-enlist		
Success w Mother	16.55	21.20	8.87	8.22	1.73	.05
Sad w Mother	26.90	22.20	9.09	10.82	1.45	.10
Like w Father	12.45	16.45	9.04	9.24	1.38	.01
Success w Father	12.95	19.30	8.65	9.18	2.68	.01
Dislike w Crew	22.55	17.70	9.37	9.43	1.63	.10
Happy w Crew	18.10	22.90	9.75	9.73	1.47	.10
Fear w Crew	22.60	16.60	11.66	9.58	1.79	.05
Dislike w Air Force	25.55	20.85	9.59	11.63	1.40	.10
Anger w Air Force	27.75	22.60	8.48	12.12	1.56	.10
Success w Air Force	17.90	23.10	9.98	12.06	1.49	.10
Like w Wife	12.10	17.60	7.62	6.17	2.50	.01
Anger w Wife	31.15	24.05	10.05	9.07	2.01	.05
Success w Wife	12.90	19.10	7.82	8.36	2.81	.005
Like w War	29.45	24.90	11.71	9.23	1.36	.10
Success w Self	11.40	16.05	6.34	8.80	1.92	.05
Fear w Self	27.55	21.40	13.31	8.03	1.77	.05
Self w Wife	12.50	18.30	7.04	8.06	2.01	.05
Father w Mother	14.15	19.05	8.65	9.05	1.75	.05

\* Lower numbers mean higher associations.

TABLE 2 : THE INFLUENCE OF ATTITUDES TOWARD FATHER ON ATTITUDES  
TOWARD THE AIR FORCE

ATTITUDE TOWARD FATHER      AIR FORCE		CORRELATIONS		Difference $Z_1 + Z_2$	Significant Level
		IN GROUP N = 20	OUT GROUP N = 20		
Success	like	- .209	+ .308	.6477	.05
Fear	anger	- .070	+ .515	.6396	.05
Like	dislike	+ .554	+ .040	.5841	.05
Anger	dislike	+ .120	+ .610	.5883	.05
Dislike	angry	+ .052	+ .494	.5793	.05
Happy	happy	- .217	+ .343	.5775	.05
Dislike	like	- .173	+ .364	.5565	.10
Sad	anger	- .074	+ .317	.5064	.10
Success	success	- .015	+ .440	.4872	.10
Fear	like	- .192	+ .265	.4659	.10
Like	happy	- .247	+ .198	.4529	.10

TABLE 3 : THE INFLUENCE OF ATTITUDES TOWARD MOTHER ON  
ATTITUDES TOWARD THE AIR FORCE.

ATTITUDES TOWARD		CORRELATIONS		Difference $Z_1 - Z_2$	Significant Level
MOTHER	AIR FORCE	In Group N = 20	Out Group N = 20		
Anger	Anger	- .141	+.841	1.3635	.001
Happy	Anger	+ .695	-.230	1.1918	.001
Anger	Happy	+ .382	-.207	.6124	.05
Like	Success	- .347	+.239	.6057	.05
Dislike	Anger	- .171	+.399	.5941	.05
Anger	Dislike	- .220	+.352	.5914	.05
Like	Fear	+ .110	+.602	.5859	.05
Happy	Happy	-.227	+.314	.5560	.10
Sad	Success	+ .255	-.238	.5034	.10



TABLE 4 : THE INFLUENCE OF ATTITUDES TOWARD WIFE ON  
ATTITUDES TOWARD THE AIR FORCE.

ATTITUDES TOWARD		CORRELATIONS			
WIFE	AIR FORCE	In Group N = 20	Out Group N = 20	Difference $Z_1 - Z_2$	Significant Level
Success	Fear	- .543	+.272	.9874	.005
Fear	Fear	+ .816	+.315	.8189	.01
Fear	Dislike	+ .674	+.011	.8070	.01
Success	Dislike	- .528	+.178	.7673	.025
Like	Fear	- .391	+.276	.6963	.05
Fear	Sad	+ .548	-.070	.6855	.05
Sadness	Success	+ .187	-.376	.5846	.05
Dislike	Sadness	+ .494	-.002	.5433	.10
Happy	Happy	+ .012	+.485	.5153	.10
Success	Like	+ .420	-.054	.5070	.10
Sadness	Fear	+. 456	-.014	.5062	.10
Anger	Anger	+ .282	+.656	.4959	.10

TABLE 5: THE INFLUENCE OF ATTITUDES TOWARD CREW MEMBERS UPON  
ATTITUDES TOWARD THE AIR FORCE.

ATTITUDES TOWARD CREW MEMBERS	AIR FORCE	CORRELATIONS		Difference $Z_1 - Z_2$	Significant Level
		In Group N = 20	Out Group N = 20		
Fear	Happy	- .414	+.101	.5417	.10
Happy	Dislike	- .675	-.283	.5390	.10
Success	Like	+ .020	+.505	.5360	.10
Sad	Dislike	+ .267	+.664	.5263	.10
Dislike	Like	- .334	+.171	.5211	.10

TABLE 6: THE INFLUENCE OF ATTITUDES TOWARD SELF UPON  
ATTITUDES TOWARD THE AIR FORCE.

ATTITUDES TOWARD		CORRELATIONS			
SELF	AIR FORCE	In Group N = 20	Out Group N = 20	Difference $Z_1 - Z_2$	Significant Level
Fear	Fear	+ .784	+ .295	.7520	.05'
Happy	Like	- .042	+ .522*	.6211	.05
Fear	Dislike	+ .593	+ .164	.5162	.10
Anger	Happy	- .320	+ .149	.4817	.10
Sad	Sad	+ .650	+ .293	.4735	.10
Anger	Success	- .287	+ .171	.4680	.10
Fear	Like	- .347	+ .104	.4644	.10
Anger	Dislike	+ .060	+ .481*	.4642	.10
Fear	Success	- .389	+ .047	.4576	.10

\* Enigmatic correlations

TABLE 7 : THE INFLUENCE OF INTERPERSONAL ASSOCIATION WITH  
ATTITUDES TOWARD THE AIR FORCE.

INTERPERSONAL ASSOCIATIONS	ATTITUDE AIR FORCE	CORRELATIONS		Difference $Z_1 - Z_2$	Significant Level
		In Group N = 20	Out Group N = 20		
Self w father	Happy	- .379	+.591	1.0790	.005
Mother w self	Success	- .345	+.366	.7435	.025
Wife w mother	Anger	+ .441	-.160	.6348	.05
Self w mother	Anger	+ .684	+.200	.6339	.05
Self w crew	Like	+ .051	+.560	.5818	.05
Crew w father	Happy	+ .117	+.599	.5740	.05
Crew w wife	Dislike	- .457	+.074	.5676	.05
Crew w self	Success	- .006	+.516	.5699	.05
Father w crew	Like	- .210	+.320	.5468	.10
Self w father	Anger	+ .226	-.285	.5253	.10
Crew w wife	Anger	- .274	+.217	.5017	.10
Wife w self	Success	- .001	+.460	.4963	.10
Crew w mother	Anger	- .274	+.217	.4909	.10
Crew w wife	Happy	+ .526	+.113	.4711	.10



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